

Sizing for Cooling Systems Residential Guideline

Issue Date:	May 12, 2014
Code/Section:	2018 IRC Section M1401.3
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Issue: The 2018 International Residential Code (IRC) Section M1401.3 requires that heating and cooling equipment and appliances shall be sized in accordance with Air Conditioning Contractors of America (ACCA) Manual S based on building loads calculated in accordance with ACCA Manual J or other approved heating and cooling load methodologies.

GUIDELINE

- Section M1401.3 is modified to incorporate the following:
- Only cooling load calculation are required
- Design temperatures shall not exceed 115 degrees Fahrenheit dry bulb and 70 degrees Fahrenheit web bulb
- Pre-approved sizing methodologies other than Manual S are allowed under Registrant seal

The following is a list of scenarios that require submittal of approved cooling load and sizing reports:

- New one- and two-family dwellings and townhouses designed under the IRC
- Remodels, additions, and detached structures greater than 500 sq. ft. that include installation of a new air conditioning system.
- Fire damage remodels involving new air conditioning systems. Reports may be submitted to the Residential Field Inspector as part of the Residential Permit by Inspection (RPBI) process.

The following exception to M1401.3 shall apply for all required cooling load and sizing report submittals. This exception is taken from the approved language contained in the 2018 IRC.

Exception: Heating and cooling equipment and appliance sizing shall not be limited to the capacities determined in accordance with Manual S or other approved sizing methodologies where ethe following condition applies. The specified equipment or appliance utilizes multi-stage technology or variable refrigerant flow technology and the loads calculated in accordance with the approved heating and cooling load methodology are within the range of the manufacturer's published capacities for that equipment or appliance. Manufacturer's equipment specifications shall be provided by the applicant.

FIELD CHANGES

Construction plans that have been approved based on specific equipment and appliances are allowed to substitute another product in the field only if the Seasonal Energy Efficiency Rating (SEER and capacity (tonnage) remain equivalent to the original design.

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